



ENVIRONMENTAL CONSULTANTS

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March 27, 2024

Ryan Clapp
Arlington Conservation Commission
730 Massachusetts Avenue Annex
Arlington, MA 02476

**Re: Notice of Intent Restoration Plan Peer Review – Review of Response to Comments
Thorndike Place, Arlington, Massachusetts**

Dear Mr. Clapp and Members of the Commission:

SWCA Environmental Consultants (SWCA) submitted a peer review letter report dated January 23, 2024 for a proposed restoration plan as part of the proposed Thorndike Place Residential Community Notice of Intent (NOI). In response to that report, BSC Group, Inc. (BSC), submitted a response to comments letter dated February 7, 2024, including revised plan materials. SWCA completed a review of those responses revised NOI documents on March 6, 2024. BSC submitted additional revised materials for review on March 7, 2024 (Invasive Species Management Plan [ISMP]) and March 12, 2024 (Response to Comments response and revised restoration plans). This correspondence represents SWCA's review of those revised materials.

PROJECT NARRATIVE

Project Activities & Associated Impacts

SWCA Comment 1: Section 3.1.1, second paragraph. The narrative states that dead trees (i.e., snags) that do not provide wildlife habitat will be cut and stumped. Snags provide a wide variety of valuable wildlife habitat functions including shelter and forage opportunities. It is doubtful there are any snags that do not provide any wildlife habitat functions. Additionally, removal of snags does not appear to provide any ecological benefit and stumping of snags within the restoration area would likely result in unnecessary additional impacts (e.g., soil disturbance).

SWCA recommends that this language be revised to indicate that only snags that pose a hazard (e.g., leaning towards the proposed buildings and likely to result in property damage or injury) be removed and that no stumping will occur. SWCA recommends the Commission also consider a condition in the Order of Conditions (OOC), if issued, stating that any snags to be removed shall be approved by the Commission.

BSC Response 1: BSC concurs with the recommended revision and suggests a Special Condition allowing removal of snags from the proposed restoration area that pose a hazard (e.g., leaning toward buildings and/or likely to result in property damage or personal injury) and that no stumping of removed snags shall be permitted. We additionally recommend that the Special Condition allow for a

representative of the Commission be authorized to coordinate, review, and approve any snag removal on behalf of the Commission to avoid construction delays.

SWCA Response 1: SWCA agrees with this response and approach. No further response required.

SWCA Comment 2: Section 3.1.1, second paragraph. The narrative states that an Invasive Species Management Plan (ISMP) for work within resource areas and their buffer zones shall be developed as required by the Comprehensive Permit. During the site walk on January 5, representatives from BSC indicated that invasive species control would be included as part of the proposed restoration efforts. It is unclear how invasive species would be controlled (e.g., mechanical removal, chemical control, etc.) or what the target species would be.

SWCA recommends the Applicant develop a detailed ISMP to be included as part of the NOI that details what the target invasive species will be, proposed specific control methodologies, a monitoring plan to measure invasive vegetation control success, and performance goals. SWCA recommends the ISMP be reviewed by an expert in invasive species removal as some species (e.g., Japanese knotweed [*Reynoutria japonica*]) can be extremely challenging to effectively control.

BSC Response 2: Several invasive plant species occur on the site, most notably Japanese knotweed, oriental bittersweet (*Celastrus orbiculatus*), and garlic mustard (*Alliaria petiolata*). These occur within jurisdictional resource areas and buffer zones, as well as within non-jurisdictional areas of the site.

BSC and the Applicant will prepare an Invasive Species Management Plan (ISMP) to treat invasive plants currently within the proposed wetland restoration area and to control their spread within the restoration area. BSC recommends that approval of such ISMP by the Commission's representative prior to the start of work be made a Special Condition of an OOC for the project.

SWCA Response 2-1: SWCA recommends that the ISMP be submitted to the Commission and reviewed by an expert in the control of invasive species prior to the issuance of an OOC. Effective control of invasive plants is critical to the success of any ISMP and may require complex management methodologies given the extent and diversity of invasive species on the site. Review of the ISMP prior to OOC issuance ensures the ISMP will be effective and that the Commission has the ability to guarantee that the plan is adequate prior to permit issuance.

BSC Response 2-1: BSC submitted a proposed ISMP for peer review on March 7, 2024.

SWCA Response 2-2: *In SWCA's experience, the most effective way to manage sites similar to the proposed project is to utilize an adaptive management approach. The mechanical, manual, and chemical options appear to be presented as if only one can be chosen for each species. For example, common reed (*Phragmites australis*) and Japanese knotweed, benefit from a combined approach (e.g., cutting first at the appropriate time and then treating with herbicide at the appropriate time. There also appears to be consistent issue throughout the ISMP of misrepresenting the proposed concentrations of herbicide and not mentioning that the chose herbicide label must be followed.*

SWCA recommends the ISMP be adaptive and that sticking to a strict pre-set and unchangeable schedule from year to year is not in the best interest of achieving effective invasive management. However, the first year's schedule should be specifically laid out. Depending on when construction is expected to commence (e.g., clearing, grading, etc.) the method of moving forward with treating invasive vegetation may need to be revised. If the exact start date of construction is unknown, the ISMP should be reframed that stresses the qualified invasive applicator/specialist can decide what treatment method and

timing should be utilized based on site conditions. SWCA also recommends the Applicant either check the label and edit the percentages of herbicide or revise the ISMP to specify that the label rates will be followed.

SWCA Comment 3: Section 3.1.1. The narrative includes multiple references to refuse that has been dumped on the site over the years. During the site walk on January 5, it was noted that as part of the proposed restoration work, the refuse would be removed as much as practicable.

SWCA recommends the Commission include a condition in the OOC, if issued, that requires all surficial refuse, including discarded clothing, metal, concrete rubble, lumber, plastic, and other similar garbage, to be removed from within the resource areas and their associated buffer zones within the limit of work. SWCA also recommends the Commission indicate that any refuse at the surface and partially buried be removed to a depth of up to 12 inches below ground (e.g., a shopping cart that has become partially buried in the soil).

BSC Response 3: BSC concurs with SWCA Comment 3 and agrees such a Condition be included as part of the OOC.

SWCA Response 3: No further response required.

SWCA Comment 4: Section 3.1.1. The narrative provides a brief discussion of the proposed restoration activities, specifically restoration plantings. However, successful habitat restorations consider a wide variety of considerations, beyond vegetation. More specifically, the wildlife habitat and vegetation evaluation provided in Attachment G of the NOI identifies numerous wildlife habitat features including large woody debris, snags, hard mast and berry producing forage, rocks and rock piles, and others.

SWCA recommends the restoration plan consider how to improve important wildlife habitat functions within the restoration area and include methods to provide important wildlife habitat features that may be lost due to proposed impacts elsewhere on site.

BSC Response 4: The Restoration Plan has been updated to include proposed placement of coarse woody debris and stones and a few stone piles using natural materials originating from within the limit of work on the project site. The Restoration Plan maximizes the use of native berry and mast producing vegetation to benefit wildlife habitat values of the restoration area. See Appendix for details of wildlife habitat features.

SWCA Response 4: SWCA concurs with these revisions. No further response required.

SWCA Comment 5: Section 3.1.1. The narrative and the wildlife habitat and vegetation evaluation identify numerous native and non-native trees and shrubs within the project limit of work, including the restoration area. However, out of the 17 proposed trees and shrubs to be planted, only two (red maple [*Acer rubrum*] and American hornbeam [*Carpinus carolineana*]) are included on the plant schedule.

SWCA recommends the restoration plan be revised to include species within the restoration area that occur on-site to better represent the diversity and community structure of adjacent habitats. There are numerous trees and shrubs documented in the NOI application materials that would be suitable for the restoration area including American elm (*Ulmus americana*), black cherry (*Prunus serotina*), yellow birch (*Betula allegheniensis*), sweet birch (*Betula lenta*), box elder (*Acer negundo*), silver maple (*Acer saccharinum*), white pine (*Pinus strobus*), sycamore (*Platanus occidentalis*), black willow (*Salix nigra*), and others that are also typically readily available as nursery stock.

BSC Response 5: BSC concurs with SWCA Comment 5 and has updated the proposed planting plan and shown approximate locations of wildlife habitats.

SWCA Response 5-1: The proposed planting plan still includes multiple species that are not representative of the of the diversity and community structure of the adjacent habitats (e.g., Atlantic white cypress [*Chamaecyparis thyoides*] and others). SWCA recommends the planting plan be revised to includes species that better represent the adjacent communities within the restoration area.

BSC Response 5-1: Please refer to Sheet L-100. No tree is proposed within the restoration area or compensatory flood storage area that is not specifically listed in SWCA Comment 5. BSC is providing a color-markup of the restoration planting sheet to clarify proposed species placements.

It should be noted that the planting plan is for the entire project site, including areas outside of the Commission’s jurisdiction.

The proposed woodland and floodplain restoration seed mixes are as follows:

| Botanical Name | Common Name |
|-------------------------------------|-------------------------|
| <i>Asclepias syriaca</i> | Common milkweed |
| <i>Asclepias incarnata</i> | Swamp butterfly weed |
| <i>Symphyotrichum novae-angliae</i> | New England aster |
| <i>Chamaecrista fasciculata</i> | Partridge pea |
| <i>Elymus canadensis</i> | Canada wild rye |
| <i>Elymus virginicus</i> | Virginia wild rye |
| <i>Festuca rubra</i> | Red fescue |
| <i>Redbeckia laciniata</i> | Green-headed coneflower |
| <i>Schizachyrium scoparium</i> | Little bluestem |
| <i>Solidago juncea</i> | Early goldenrod |
| <i>Sorghastrum nutans</i> | Indian grass |
| <i>Symphyotrichum novi-belgii</i> | New York aster |
| <i>Baptisia tinctoria</i> | Horseflyweed |
| <i>Desmodium canadense</i> | Show tick-trefoil |
| <i>Euthamia graminifolia</i> | Flat-top goldenrod |
| <i>Pycnanthemum virginianum</i> | Virginia mountain mint |

SWCA Response 5-2: SWCA concurs with these revisions. No further response required.

SITE PLANS

SWCA Comment 6: Sheet G-101, Planting Notes, Note 11. The site plans indicate that the plant species indicated on the plant list are recommendations only and that final selection of the species shall occur at the time of plant purchase, depending on availability and that the size and quantity shall not change without approval of the Applicant’s landscape architect.

SWCA recommends this note be revised to indicate that the proposed planting species, sizes, and quantities may be subject to change based on availability. However, these changes should be approved by the Conservation Commission and should be approved prior to purchase.

BSC Response 6: BSC has made the recommended revision to the Sheet G-101 Planting Notes, Note 11. We recommend that the OCC allow administrative approval of such availability-based changes by the Conservation Commission or its authorized representative to prevent undue construction delays in making such substitutions if necessary.

SWCA Response 6: SWCA agrees with these revisions. No further response required.

SWCA Comment 7: Sheet G-101, Comprehensive Permit Notes, Comment I.5. This comment notes that dumping of woody vegetation, brush, and other debris in a resource area or its associated buffer zone is prohibited.

SWCA notes that an exception to this requirement might be considered for the restoration area as large woody debris, brush piles, and other similar wildlife habitat features provide quality habitat functions and are likely to increase the ecological value of the restored habitats.

BSC Response 7: Sheet G-101, Comprehensive Permit Notes, Comment 1.5 is a Condition of the Comprehensive Permit, and the wording is copied directly from that Condition. The intent of the Condition is to prohibit the dumping of materials removed during construction in the wetlands or buffer zone. In accordance with BSC Response 4 above, the Restoration Plan will be updated with detailed natural coarse woody debris and stone wildlife habitat features using materials originating from the site, but material removed from the site during construction will not be disposed of within resource areas or associated buffer zones in accordance with the Comprehensive Permit condition.

SWCA Response 7: SWCA agrees with this approach. No further response required.

SWCA Comment 8: Sheet G-101, Comprehensive Permit Notes, Comment I.25. The site plans note that the survival rate of planted species shall be 80% at the end of the third year and that a corrective action plan must be submitted if the survival rate is less than 80% at the end of the third year.

SWCA recommends the Commission consider requiring a corrective action plan to be developed by the Applicant if the 80% success rate is not met after any year of monitoring. Waiting until the third year of monitoring to develop and implement any corrective actions may unnecessarily prolong reaching the project's performance goals and may result in unnecessary disturbance to the area to rectify any adverse conditions since the restoration area will have had three years to establish.

BSC Response 8: Sheet G-101, Comprehensive Permit Notes, Comment I.25 is a condition of the Comprehensive Permit, and the wording is copied directly from that Condition. The Comprehensive Permit Condition was prepared upon the recommended conditions submitted to the Zoning Board by the Conservation Commission by letter dated October 14, 2021.

SWCA Response 8: No further response required.

SWCA Comment 9: Sheet L-100, Plant Schedule. The plant schedule includes a number of proposed cultivars within the 100-foot Buffer Zone (e.g., *Clethra alnifolia* 'ruby spice', *Hydrangea quercifolia* 'ruby slippers', and *Hydrangea arborescens* 'annabelle'). In accordance with condition I.24 of the Comprehensive Permit, all mitigation plantings and plantings within all resource areas shall be native, non-cultivar species. Additionally, other cultivars are proposed in other areas of the site along side non cultivars of native species (e.g., pin oak [*Quercus palustris*] and green pillar pin oak [*Q. palustris* 'pringreen'])).

SWCA recommends the planting plan be revised to not include any cultivars.

BSC Response 9: BSC concurs with SWCA Comment 9 and has revised the planting plan to not include cultivars within the 100-foot buffer.

SWCA Response 9-1: The revised planting plan continues to propose a number of cultivars within the 100-foot Buffer Zone. Other cultivars are still proposed in other areas of the site.

SWCA recommends the planting plan be revised to not include any cultivars. SWCA also encourages the Applicant to utilize non-cultivars of native species throughout the site.

BSC Response 9-1: BSC has revised the proposed restoration planting plan to remove cultivars and has revised the proposed seed mixes for the restoration and compensatory flood storage areas to contain only native plants. The lawn seed mix has also been revised to contain only native species.

It should be noted that the planting plan is for the entire project site, including areas outside of the Commission's jurisdiction. There is one plant proposed that is a non-native landscaping plant, but it is proposed to be located along the walking path between the buildings, outside of the Commission's jurisdiction.

SWCA Response 9-2: SWCA concurs with these revisions. No further response required.

SWCA Comment 10: Sheet L-100. A note on the plans indicates that all dead trees (i.e., snags) that do not provide wildlife habitat per the landscape architect and wildlife ecologist should be removed. Snags provide a wide variety of valuable habitat functions for wildlife including forage for insects, perches to hunt from, shelter if there are cavities or cracks, and other functions.

SWCA recommends this note be revised to indicate that only snags that pose a hazard (e.g., may fall and land on the buildings) may be removed and that removal of any snags must be approved by the Commission.

BSC Response 10: BSC concurs with SWCA Comment 10 and has revised Sheet L-100 according to SWCA's Comments 1 and 10.

SWCA Response 10-1: This note does not appear to indicate that removal of any snags must be approved by the Commission.

SWCA recommends revising this note as to indicate that Commission approval is required for snag removal.

BSC Response 10-1: The note on Sheets L-100 has been updated to state, "2. Remove all invasive species according to ISMP; cut and remove (do not stump) all dead trees that pose a safety hazard to people or property as determined by Landscape Architect (LA) & Wildlife Ecologist (WE) with administrative approval of Conservation Commission; restore areas with native tree, shrub, and grass plantings as directed by LA. Utilize cut plant materials to construct snags and wildlife habitats as directed by LA & WE.

SWCA Response 10-2: SWCA concurs with these revisions. No further response required.

If you have any questions or comments, please do not hesitate to contact me at either (508) 232-6668 or chase.bernier@swca.com.

Sincerely,



P. Chase Bernier, CWB, PWS, CERP
Senior Natural Resources Team Lead
